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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/658,403 | 09/10/2003 | Matthias Frank | 03:99 | 2240 |

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Ronald E. Greigg
Greigg & Greigg, P.L.L.C.
1423 Powhatan Street
Alexandria, VA 22314

| EXAMINER | |
|---|---|
| NGUYEN, THUKHANH T | |
| **ART UNIT** | **PAPER NUMBER** |
| 1722 | |

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/658,403 | FRANK ET AL. | |
| | Examiner | Art Unit | |
| | Thu Khanh T. Nguyen | 1722 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *10 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4, 7, and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al (4,755,128) in view of Miyajima (5,800,841).

Alexander et al disclose an apparatus for releasing a press-formed article from a die set, comprising a forming tool (10), a male mold (18) and a female mold (22) forming a mold cavity, or opening (55), a stripper plate – or a first parting tool (80) surrounding the rim of the mold cavity and connecting to a lower die shoe – or first support means (12), a trim ring – or a second parting tool (78) connecting to an upper die shoe – or a second support means (14), means (79, 82) for fastening the stripper plate to the die shoes.

Alexander et al fail to disclose that the parting tools are made of material different than the mold support means.

Miyajima disclose a molding apparatus, comprising upper and lower mold dies (10a, 10b) made of steel and cavity pieces (22a, 22b) that are directly contact and shape the mold material are made of different material such as copper or aluminum to improve heat conductivity of the die machine to the molding article (col. 3, lines 55-67).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Alexander et al by providing different mold parts made of

different material as taught by Miyajima in order to provide a stripper plate, or a parting tool made of higher heat conductivity material for fast heating and/or cooling of the forming material, while the supporting means could be made of harden material to provide a better support the die.

In regard to claims 4, 7, 10 and 15, Alexander et al teach that means for fastening the stripper plate, or parting plate to the die shoe is connected between the die shoe and the tripper plate (Fig. 1, 79, 82), wherein the fastening are threaded air cylinders (79) and collapsible spring (82) that read on a fastening bolt, a spot weld and a guide means for moving the rings relative to other mold parts (col. 6, lines 36-44).

In regard to claims 11-14, the fastening means comprise a plurality of parallel guide means (82, and the body of the threaded cylinders 79) and a plurality of groove on the rings for receiving the guide means (Fig. 1, 78, 80).

3. Claims 2, 3, 5-6, 8-9 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al (4,755,128) in view of Miyajima (5,800,841) as applied to claims 1, 4, 7, and 10-15 above, and further in view of Kuhn (5,281,784).

Alexander et al fail to disclose bending elements for fastening the mold parts.

Kuhn discloses a mold assembly, comprising a temperature-sensitive fastening means (24) that is bendable at high temperature to cause hook (25) to engage catch (26) to latch the mold container.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Alexander et al by providing the fastening element that bendable

at high temperature as taught by Kuhn, in order to enhance the secure of the mold parts during the molding process at high temperature.

4. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al (4,755,128) in view of Miyajima (5,800,841) as applied to claims 1, 4, 7, and 10-15 above, and further in view of Crain et al (5,980,809).

Alexander et al fail to disclose a low friction sliding layer on the parting tool.

Crain et al disclose a molding apparatus, having a stripper ring (96) connected to the mold support (99) by slidable guide pins (177) through grooves (175), in which the guide pin and the grooves are formed from a wear resistance and low friction material.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Alexander et al by providing a layer of low friction material in between the stripper ring, or parting plate and the mold part as taught by Crain et al in order to provide a smooth sliding of the parting plate relative to the mold part.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 571-272-1136. The examiner can normally be reached on Monday- Friday, 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin L. Utech can be reached on 571-272-1137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN

BENJAMIN L. UTECH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

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